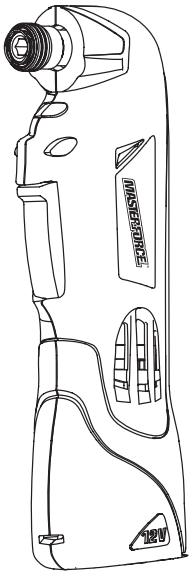
MASTER FORCE®

12 Volt Lithium-Ion Right Angle Drill



241-0315

OPERATOR'S MANUAL

⚠ CAUTION: To Reduce The Risk Of Injury, User Must Read And Understand The Operator's Manual. Save These Instructions For Future Reference.

For questions / comments, technical assistance or repair parts – Please Call Toll Free: 1-866-917-4374. (M-F 8am – 6pm EST.)

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SAFETY SYMBOLS

Some of these following symbols may be used on this tool. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the tool better and more safely.

Symbol	Name	Designation / Explanation
V	Volts	Voltage
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watts	Power
∿	Alternating current	Type of current
⎓	Direct current	Type of characteristic of current
n_o	No-load speed	Rotational speed at no load
⧈	Class II construction	Double insulated construction
.../min	Per minute	Revolutions, strokes, surface speed orbits, etc., per minute
	Wear safety goggles	**⚠ WARNING: The operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, always wear safety goggles or safety glasses with side shields and a full-face shield when needed. We recommend a Wide Vision Safety Mask for use over eye-glasses or standard safety glasses with side shields. Always use eye protection which is marked to comply with ANSI Z87.1.**

⚠ WARNING: To ensure safety and reliability, all repairs should be performed by a qualified service technician.

SAFETY INSTRUCTIONS

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols and the explanations with them deserve your careful attention and understanding. The symbol warnings do not, by themselves, eliminate any danger. The instructions and warnings they give are no substitutes for proper accident prevention measures.

⚠ WARNING: Be sure to read and understand all safety instructions in this manual, including all safety alert symbols such as "DANGER," "WARNING," and "CAUTION" before using this tool. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious personal injury.

SYMBOL MEANING

SAFETY ALERT SYMBOL: Indicates DANGER, WARNING, OR CAUTION. May be used in conjunction with other symbols or pictographs.

⚠ DANGER: Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.

⚠ WARNING: Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

⚠ CAUTION: Indicates a potentially hazardous situation, which, if not avoided, could result in minor or moderate injury.

NOTICE: (Without Safety Alert Symbol) Indicates a situation that may result in property damage.

SAVE THESE INSTRUCTIONS!

SAFETY INSTRUCTIONS

GENERAL SAFETY RULES

⚠ WARNING: Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term power tool in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

WORK AREA SAFETY

1. **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

ELECTRICAL SAFETY

1. **Power tool plugs must match the outlet.** Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
2. **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
3. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
4. **Do not abuse the cord.** Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
5. **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
6. **If operating a power tool in a damp location is unavoidable, use a ground-fault circuit interrupter (GFCI) protected supply.** Use of a GFCI reduces the risk of electric shock.

PERSONAL SAFETY

1. **Stay alert, watch what you are doing and use common sense when operating a power tool.** Do not use tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.
2. **Use personal protective equipment.** Always wear eye protection. Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
3. **Prevent unintentional starting.** Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.
4. **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
5. **Do not overreach.** Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.

6. **Dress properly.** Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
7. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of these devices can reduce dust-related hazards.

POWER TOOL USE AND CARE

1. **Do not force the power tool.** Use the correct power tool for your application. The correct power tool will do the job better and more safely at the rate for which it was designed.
2. **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
3. **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
4. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
5. **Maintain power tools.** Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
6. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
7. **Use the power tool, accessories, tool bits, etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

BATTERY TOOL USE AND CARE

1. **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
2. **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
3. **When the battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.
4. **Under abusive conditions, liquid may be ejected from the battery; avoid contact.** If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.

SERVICE

1. **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

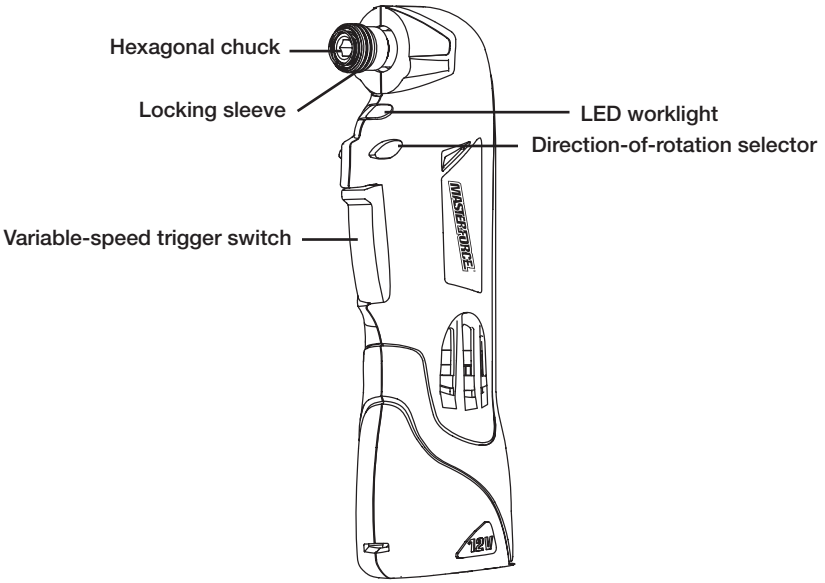
SPECIFIC SAFETY INSTRUCTIONS FOR RIGHT ANGLE DRILL

1. **Use the tool only with the battery and charger listed below:**

Battery pack	Charger
252-8016	252-8020
252-8017	

2. **Hold power tools by their insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord.** Contact with a "live" wire will make the exposed metal parts of the tool "live" and shock the operator.
3. **Use clamps or another practical way to secure and support the workpiece to a stable platform before drilling.** Holding the work by hand against your body leaves it unstable and may lead to loss of control.
4. **Always hold the tool with both hands.** If the bit jams two hands will give you maximum control over torque reaction or kickback.
5. **Use protective gloves when removing the bit from the tool, or first allow the clamp to cool down.** The bit may be hot after prolonged use.
6. **Use protective gloves when operating the tool.** Protective gloves can help to keep you from being burnt and hurt.
7. **Keep your hands away from the motor-housing vents.** Hot gas comes from the vents during operation.
8. **If the bit becomes bound in the workpiece, release the trigger immediately, reverse the direction of rotation and slowly squeeze the trigger to back out the bit.** Be ready for a strong reaction torque. The drill body will tend to twist in the opposite direction as the drill bit is rotating.
9. **Release the trigger immediately when the screws are tightened to avoid breaking the screw.**
10. **For best results, your battery tool should be charged in a location where the temperature is more that 50°F (10°C) but less that 104°F (40°C).** Do not store outside or in vehicles.

OVERVIEW



SPECIFICATIONS

Motor	12 Volt DC
Switch	VSR (Variable Speed Reversible)
No-Load speed	0-700 RPM
Chuck	1/4” (6.35 mm)
Maximum torque	120 in-lbs.
Drill weight (Without battery)	1 lb. 6 oz.

SPECIFICATIONS

1/4 IN. QUICK CHUCK

Quick and easy bit changes without the need for tools.

VARIABLE SPEED

The variable speed trigger switch delivers higher speed with increased trigger pressure and lower speed with decreased trigger pressure.

FORWARD/CENTER LOCK/REVERSE

The right angle drill has a direction of rotation selector for changing the direction of bit rotation; it is located above the trigger switch. Setting the trigger switch in the OFF (center lock) position helps reduce the possibility of accidental starting when not in use.

LED WORKLIGHT

The LED worklight, located on the front of the right angle drill, illuminates when the trigger switch is depressed. This feature provides extra light for increased visibility.

ELECTRIC BRAKE

The electric brake will stop the bit rotation after the operator releases the trigger switch.

ASSEMBLY

⚠ WARNING: If any part is broken or missing, do not attempt to attach the battery or operate the right angle drill until the broken or missing parts are replaced. Failure to do so could result in possible serious injury.

⚠ WARNING: Do not attempt to modify this right angle drill or create accessories not recommended for use with this right angle drill. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious injury.

⚠ WARNING: To prevent accidental starting that could cause serious personal injury, always remove the battery pack from the right angle drill when assembling parts.

UNPACKING

This product has been shipped completely assembled.

1. Carefully remove the tool and any accessories from the box. Make sure that all items listed in the packing list are included.
2. Inspect the tool carefully to make sure no breakage or damage occurred during shipping.
3. Do not discard the packing material until you have carefully inspected and satisfactorily operated the tool.

CONTENTS

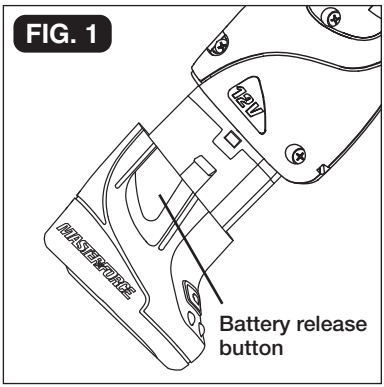
Right angle drill, 1pc PH2 bit, nylon storage bag and operator's manual.

OPERATION

TO ATTACH BATTERY PACK (FIG. 1)

⚠ CAUTION: When placing the battery pack in the tool, be sure that the raised rib on battery pack aligns with the groove on the drill and the latches snap into place properly. Improper assembly of the battery pack can cause damage to internal components.

⚠ CAUTION: Avoid the possibility of accidental starting, always take care not to activate the trigger switch when you are attaching the battery pack or performing other adjustments to the tool.

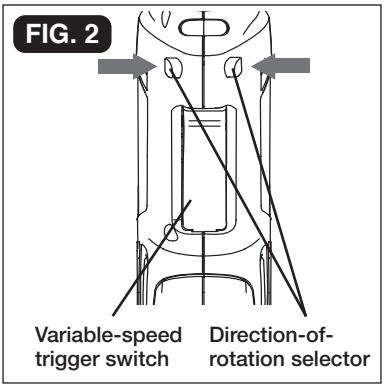


1. Align the raised portion on the battery pack with the grooves on the bottom of the right angle drill then attach the battery pack to the right angle drill as shown.
2. Make sure that the latch on the battery pack snaps into place and battery pack is secured to tool before beginning operation.

TO DETACH BATTERY PACK (FIG. 1)

1. Depress the battery release button located on the both sides of the battery pack to release battery pack.
2. Pull battery pack out and remove it from the tool.

TRIGGER SWITCH (FIG. 2)



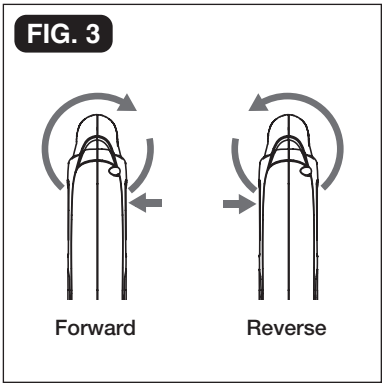
To turn the tool ON, depress the trigger switch.
To turn it OFF, release the trigger.

VARIABLE SPEED (FIG. 2)

The variable-speed trigger switch delivers higher speed with increased trigger pressure and lower speed with decreased trigger pressure.

OPERATION

DIRECTION-OF-ROTATION SELECTOR (FORWARD/ CENTER LOCK/REVERSE) (FIG. 3)



The direction of the bit rotation is reversible and is controlled by a selector located above the trigger switch.

With the right angle drill held in normal operating position:

1. Position the direction of rotation selector to the left of the tool for forward rotation.
2. Position the direction of rotation selector to the right of the tool for reverse.
3. Setting the switch in the OFF (center lock) position helps reduce the possibility of accidental starting when not in use.

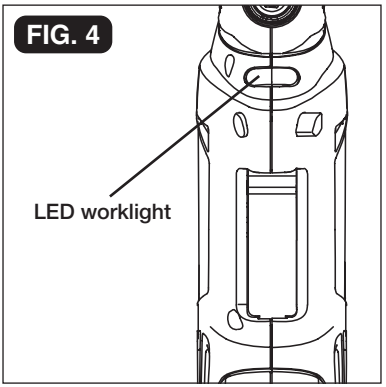
NOTICE: To prevent gear damage, always allow the chuck to come to complete stop before changing the direction of rotation.

NOTICE: The drill will not run unless the direction of rotation selector is engaged fully to the left or right.

ELECTRIC BRAKE

To stop the right angle drill, release the trigger switch and allow the chuck to come to a complete stop. The electric brake quickly stops the chuck from rotating. This feature engages automatically when you release the trigger switch.

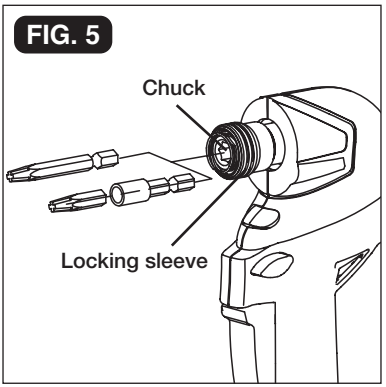
LED WORKLIGHT (FIG. 4)



The LED worklight located on the front of the right angle drill will turn on when the trigger switch is depressed. The LED worklight will turn off when the trigger switch is released. This provides additional lighting on the surface of the workpiece for operation in lower light areas.

OPERATION

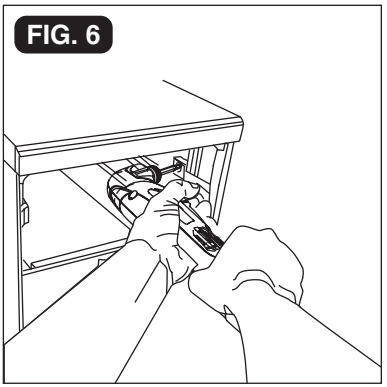
INSTALLING BITS (FIG. 5)



1. Lock the trigger switch by placing the direction of rotation selector in the OFF (center) position.
2. With one hand, pull the sleeve toward the front of the tool, and hold it in place.
3. With the other hand, insert the 1/4-in. bit into the hexagonal chuck.
4. Release the sleeve and check that it returns to its original position and the bit is securely held in place.
5. To remove an accessory, pull the locking sleeve forward and simply remove the bit.

⚠ WARNING: If the sleeve does not return to its original position, the bit is not correctly installed. To avoid loss of control, ensure that the bit is locked in the chuck by pulling on the bit after it has been inserted.

DRILLING (FIG. 6)



When drilling hard, smooth surfaces use a center punch to mark the desired hole location. This will prevent the drill bit from slipping off center as the hole is started.

The material to be drilled should be secured in a vise or with clamps to keep it from turning as the drill bit rotates. Hold the tool firmly and place the bit at the point to be drilled. Depress the switch trigger to start the tool.

Move the drill bit into the workpiece applying only enough pressure to keep the bit cutting. Do not force or apply side pressure to elongate a hole.

DRILLING WOOD

When drilling hole in wood, twist bits can be used. Twist bits may overheat unless pulled out frequently to clear chips from flutes.

Use a “back-up” block of wood for work that is likely to splinter, such as thin materials. You will drill a cleaner hole if you ease up on the pressure just before the bit breaks through the wood. Then complete the hole from the back side.

OPERATION

DRILLING METAL

There are two rules for drilling hard materials. First, the harder the material, the greater the pressure you need to apply to the tool. Second, the harder the material, the slower the speed you need to operate the tool.
Here are a few tips for drilling in metal:

1. Lubricate the tip of the bit occasionally with cutting oil except when drilling soft metals such as aluminum, copper or cast iron.
2. If the hole to be drilled is fairly large, drill a smaller hole first, then enlarge to the required size, it's often faster in the long run.
3. Maintain enough pressure to assure that the bit does not just spin in the hole. This will dull the bit and greatly shorten its life.

MAINTENANCE

⚠ WARNING: Always wear safety goggles or safety glasses with side shields during power tool operation or when blowing dust. If operation is dusty, also wear a dust mask.

⚠ WARNING: To avoid personal injury, always remove the battery pack from the tool when cleaning or performing any maintenance.

GENERAL MAINTENANCE

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, dust, oil, grease, etc.

⚠ WARNING: Do not at any time let brake fluids, gasoline, petroleum-based products, penetrating oils, etc. to come in contact with plastic parts. Chemicals can damage, weaken or destroy plastic which may result in serious personal injury.

⚠ WARNING: When servicing, use only identical replacement parts. Use of any other parts may create a hazard or cause product damage. To ensure safety and reliability, all repairs should be performed by a qualified service technician.

TROUBLESHOOTING

PROBLEM	CAUSE	SUGGESTED CORRECTIVE ACTION
The drill does not work.	The battery is depleted.	Charge the battery.
The bit cannot be installed.	1. The sleeve is not released.	Use the proper bit.
	2. Bit does not fit the sleeve.	

NOTES

12 VOLT LITHIUM-ION RIGHT ANGLE DRILL

WARRANTY

90-DAY MONEY BACK GUARANTEE:

This MASTERFORCE® brand power tool carries our 90-DAY Money Back Guarantee. If you are not completely satisfied with your MASTERFORCE® brand power tool for any reason within ninety (90) days from the date of purchase, return the tool with your original receipt to any MENARDS® retail store, and we will provide you a refund – no questions asked.

3-YEAR LIMITED WARRANTY:

This MASTERFORCE® brand power tool carries our famous No Hassle 3-Year Limited Warranty to the original purchaser. If, during normal use, this MASTERFORCE® power tool breaks or fails due to a defect in material or workmanship within three (3) years from the date of original purchase, simply bring this tool with the original sales receipt back to your nearest MENARDS® retail store. At its discretion, MASTERFORCE® agrees to have the tool or any defective part(s) repaired or replaced with the same or similar MASTERFORCE® product or part free of charge, within the stated warranty period, when returned by the original purchaser with original sales receipt. Not withstanding the foregoing, this limited warranty does not cover any damage that has resulted from abuse or misuse of the Merchandise. This warranty: (1) excludes expendable parts including but not limited to blades, brushes, belts, bits, light bulbs, and/or batteries; (2) shall be void if this tool is used for commercial and/or rental purposes; and (3) does not cover any losses, injuries to persons/property or costs. This warranty does give you specific legal rights and you may have other rights, which vary from state to state. Be careful, tools are dangerous if improperly used or maintained. Seller's employees are not qualified to advise you on the use of this Merchandise. Any oral representation(s) made will not be binding on seller or its employees. The rights under this limited warranty are to the original purchaser of the Merchandise and may not be transferred to any subsequent owner. This limited warranty is in lieu of all warranties, expressed or implied including warranties or merchantability and fitness for a particular purpose. Seller shall not be liable for any special, incidental, or consequential damages. The sole exclusive remedy against the seller will be for the replacement of any defects as provided herein, as long as the seller is willing or able to replace this product or is willing to refund the purchase price as provided above. For insurance purposes, seller is not allowed to demonstrate any of these power tools for you.

For questions / comments, technical assistance or repair parts – Please Call Toll Free at: **1-866-917-4374**. (M-F 8am – 6pm EST)

SAVE YOUR RECEIPTS
THIS WARRANTY IS VOID WITHOUT THEM

MASTER FORCE®

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09/2013